

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

JUN 17 1989

Ms. Shannon K. Craig
Program Manager, Previously
Owned Properties
Keystone Environmental Services, Inc.
436 Seventh Avenue, Suite 1940
Pittsburgh, PA 15219

Re: Second Draft RI Report - South Cavalcade Site

Dear Ms. Craig:

I have reviewed the second draft Remedial Investigation report, and am by this letter transmitting my comments. Overall, the report shows a definite improvement over the first draft. Most of the initial comments on the first draft were addressed in full by the second draft.

However, there are still two areas which need further careful thought. The first is in the discussion of ground water contamination. Chapter 4 notes three distinct ground water units: shallow, intermediate, and deep. The previously defined "upper intermediate" unit is now considered as interspersed sand lenses within the intermediate aquitard. As you may remember, I had suggested that interpretation of the data after review of the first draft with hydrogeologists at EPA and CDH. However, Chapter 7 combines the contaminant concentrations in these lenses with the contaminant concentrations in the shallow aquifer, and calls the combination the "shallow" ground water. This is an inconsistency, and only confuses the reader.

I suggest that you add an explanation to describe in detail why you combined the data. I understand the purpose was to be able to portray the vertical attenuation in ground water concentrations within the subsection relating to the shallow aquifer. You must clarify this purpose.

Second, the data summaries in Chapter 9 do not agree with the data tables in the Volume 3 or Chapter 7 appendices. I understand that some of the differences may be explained by the revised QA/QC analysis, and that the Volume 3 appendices do not yet incorporate these revisions. However, the data in Chapter 7 do reflect the QA/QC revisions, and the number of detections stated in Chapter 9 do not always correspond with the number of detections in the Chapter 7 appendices. I found differences in number of detections, number of samples, and number of "J" values. You need to proof these tables.

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In addition, I have enclosed a list of typographical errors, points requiring one or two further sentences of explanation, and comments outstanding from the first draft (mostly on the Volume 2 and 3 appendices).

With the short time left until the final report is due to EPA, I suggest that you set up a call between Bill Tobin, you, and me to discuss these comments. Upon your suggestion, I will directly send Bill a copy of this letter.

Sincerely yours,

James F. Pendergast, D.E.
Remedial Project Manager

Enclosure

cc: W. Tobin, McBride-Ratcliff
J. Brown, Texas Water Commission

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COMMENTS ON VOLUME 1 OF THE DRAFT RI REPORT

No	Page	Par	Line	Comment
1	----	-	--	Add a list of acronyms.
2	vi	2	--	Add discussion about general ground water flow direction.
3	x	2	--	Correct the range of copper concentrations.
4	x	3		Why do you say there are no surficial contaminant source areas when soil staining was noted at 44 locations?
5	xiii	-	--	Replace the column headings for "Maximum Detected Concentrations" with "Maximum Sample".
6	xvi	2	4	Replace "two" with "one".
7	xvii	1	--	Correct the discussion to note that there was an increase in downwind concentrations for phenol
8	-----			Add a section to the Executive Summary or Chapter 1 which discusses the extent and nature of the contamination.
9	1-9	3	2	Change "North" to "South".
10	2-18	1	7	Change "perent" to "percent".
11	Table 3-2			Why aren't wells P06, P07 and CT-OW-01 also listed here.
12	3-29	2	--	State that the injected water was potable water. What is the precision and accuracy of the water level indicators.
13	3-43	1	10	There is a missing line of text.
14	Figure 4-11 Figure 4-12			The figures are exhaustive, but unclear. Provide a better quality reproduction.
15	4-36	1	--	Can we add the estimated discharge rate and duration of this leak?
16	Section 5.3.4			Are there any conclusions regarding potential source areas or correlations with contaminated soils or groundwater?
17	Section 5.4.4			The section should include discussion of potential source areas, relationship to surface water results, and comparison to background levels.
18	7-2	Bullets		Section 4.3 defines the intermediate water unit as being in soil unit 3, not soil unit 2. Be consistent.
19	7-2	2	--	Chapter 7 combines for discussion purposes the shallow wells and the wells previously defined as being in the upper intermediate aquifer. This is somewhat confusing. Add a sentence to say that you are combining these data into the discussion for the shallow aquifer.

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COMMENTS ON VOLUME 1 OF THE DRAFT RI REPORT continued

No	Page	Par	Line	Comment
20	7-3	Notes		Why is the cyanide QA/QC omitted?
21	7-12	3	5	We had agreed to delete the sentence on the "fairly consistent" results because of well MW-16.
22	Section 7.5			Given that MCL's or MCLG's exist for three of the detected volatile organic compounds, why aren't volatile organic results for groundwater discussed?
23	7-18	1	6	Appendix 7A shows 6 detections, not 5.
24	7-18	Borings		Add A14-SB06 to the list.
25	7-18	2	4	Appendix 7B shows 13 no detections of PAHs, not 16.
26	7-19	2	10	Were the non-aqueous phase liquids noted in Well CAV-0W11 lighter or denser than water? This has significant implications for solute transport.
27	7-21	3	--	The wording is confusing because you use the term "paired wells" to define the deeper wells. Rephrase to say you are comparing adjacent wells located in two different water units to show vertical attenuation.
28	7-22	2	5	Change "were (AVOC)" to "(AVOC) were".
29	Section 7.9.1			It should be noted that 4 of the 5 Unit 4 soil samples discussed here are located outside of the site boundary.
30	7-42	Borings		Add A03-SB05 to the list.
31	7-42	2	2	Where are the PAHs migrating from?
32	7-42	2	3	Delete A03-SB05; the boring indicates PAHs at 55 feet.
33	7-44	Bullets		Identify the levels of surrogate and laboratory responses which you used to determine the presence of contamination. This should be similar to the discussion on page 7-41.
34	7-44			Add a map and discussion for volatiles and metals.
35	7-44	2	1	Use "combined" instead of "composited"; composited implies something other than combining information.
36	7-46	1	--	What accounts for off-site migration of PAH compounds to the southeast? According to Figure 4-6 and the groundwater contour maps in Appendix I, Volume 3, this is in the upgradient and updip direction.
37	8-12	2	13	The last part of the paragraph is confusing. One sentence states that it is impossible to evaluate collection efficiency whereas the next sentence says it is satisfactory. Reword to clarify the points you are making.

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COMMENTS ON VOLUME 1 OF THE DRAFT RI REPORT continued

No	Page	Par	Line	Comment
38	Fig 9-2			We had agreed to replace Figure 9-2 with a map showing the surficial contamination and the <u>paved</u> areas.
39	Tab 9-4			There are discrepancies between the Chapter 7 appendices and these tables.
	Tab 9-5			
	Tab 9-6			-- ditto --
	Tab 9-7			-- ditto --

COMMENTS ON VOLUME 2 OF THE DRAFT RI REPORT

No	Page	Par	Line	Comment
1	Appendix G			Add the 9/17/86 letter from James Campbell which requests the revised sampling program.

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COMMENTS ON VOLUME 3 OF THE DRAFT RI REPORT

No	Page	Par	Line	Comment
1	A-1	Table		State why sample A14-SB03-19 has a hydraulic conductivity two orders of magnitude greater than others.
2	A-6	Figure		We feel that the 51 foot sample for SCK-P05 is a clayey sand as stated in Appendix F and nearby boring A26-SB03.
3	C-1	1	1	What measure was evaluated? This paragraph implies magnitude; the statement discusses presence.
4	C-1	1	11	How was agreement on negative correlations used?
5	C-2	Note 2		What is this describing?
6	C-3	2	---	Identify in this paragraph a high value from the data. This is needed for comparison to the low values discussed.
7	C-3	3	---	We do not believe you have sufficient data to make any statistically significant statement about x-ray fluorescence. However, we agree that your data shows that x-ray fluorescence is not a proven method for this site.
8	C-4	Table		The "zero" for zinc should be "4".
9	C-6	3	13	Insert "total aromatic hydrocarbons" after "samples".
10	C-11	1	1	The first part of the sentence is missing.
11	C-11	1	---	Show the data regarding the replicates.
	C-11	3	---	" " " " " "
12	E-9	Table		The data are missing from the table.
13	J-1			The hydraulic conductivity test procedure is questionable. If static water levels are above the top of the confined aquifer, the process of "saturating" the test zone is unnecessary and creates an artificial static head (H).
14	Appendix L			Add the well records for wells 407, 408, and 438.
15	Appendix Q			Some of the unit number assignments appear inconsistent.
16	Appendix R			Add the validation status for each sample.
17	Appendix S			Is the 2-methylnaphthalene value for A13-SB01-10 correct? Also, the 2-nitrophenol and 2,4-dimethylphenol values disagree with Appendix R, Volume 3 for sample MW12-001.
18	Appendix S			Blank contamination is not discussed in the text. How was it incorporated into the evaluation of sampling results?
19	Appendix S			Doesn't the high lead blank (SW08-01) make the lead results only qualitative?

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